CLAIMS

What is claimed is:

1.   A wireless communication system comprising:

a plurality of access points coupled to a network;

a plurality of mobile station systems operative to communicate wirelessly to at least one of the plurality of access points; and

an interference monitor that monitors interference in the system by monitoring error statistic data from the at least one of the plurality of access points.

2.   The system of claim 1, the interference monitor requesting raw baseband data from the at least one of the plurality of access points upon detecting unusual error statistic data.

3.   The system of claim 2, the interference monitor operative to determine the location of the interference utilizing the raw baseband data.

4.   The system of claim 2, the interference monitor operative to determine the type of interference by comparing the raw baseband data to at least one interference template.

5.   The system of claim 2, the interference monitor operative to determine the location of the interference and the type of interference utilizing the raw baseband data and transmit the location of the interference and the type of interference to a graphical user interface, the graphical user interface displaying the location of the plurality of mobile station systems and the type and location of interference.

6.   The system of claim 1, the interference monitor operative to determine the location of the interference utilizing the error statistic data.

7.   The system of claim 1, at least one of the plurality of mobile station systems being adapted to log error data and transmit the error data to the interference monitor for analysis.

8.   The system of claim 1, at least one of the plurality of mobile station systems being adapted to enter a passive mode, while at least one of the plurality of access points is gathering sample data for determine the existence of interference.

9.   The system of claim 1, the interference monitor operative to reconfigure the network to minimize the effects of any detected interference.

10.   The system of claim 1, the interference monitor operative to transmit interference information to a host computer, the host computer utilizing the interference information to reconfigure the wired communication system to minimize the effects of any detected interference.

11.   The system of claim 1, at least one of the plurality of access points comprising at least one passive access point that monitors interference.

12.   The system of claim 1, the plurality of access points being switchable between an active mode and a passive mode.

13.   The system of claim 1, at least one of the plurality of access points utilizing at least one of a directional antenna and an active antenna.

14.   The system of claim 1, at least a portion of the interference monitor being incorporated into at least one of an access point, a host computer and a mobile station system.

15.   The system of claim 1, the interference monitor being a stand-alone device coupled to the network.

16.   The system of claim 1, the wireless communication system conforming to the IEEE 802.11b standard.

17.   The system of claim 1, the interference monitor operative to determine if interference is present outside the wireless communication system.

18.   An interference monitor for monitoring interference within a wireless communication system, the interference monitor comprising:

a control system operative to retrieve error statistic data from at least one device in the wireless communication system;

a monitor that monitors the error statistic data and informs the control system if unusual error statistic data is present at the at least one device, the control system retrieving raw data from the at least one device that unusual error statistic data has been detected; and

an analyzer that utilizes the raw data to characterize interference present in the wireless communication system.

19.   The monitor of claim 18, the analyzer characterizes the interference by processing the raw data and comparing the processed raw data to at least one interference template to determine the type of interference.

20.   The interference monitor of claim 18, the analyzer characterizes the interference by comparing raw basedband data from one or more access points to determine the location of the interference.

21.   The interference monitor of claim 18, the control system transmits the characterization information to a graphical user interface, the graphical user interface displaying at least a portion of the wireless communication system and at least one of a type and a location of the interference.

22. The interference monitor of claim 18, one of the analyzer, the monitor and the control system operative to determine the location of the interference.

23. The interference monitor of claim 18, the control system operative to reconfigure the wired communication system to minimize the effects of any detected interference.

24. The interference monitor of claim 18, the control system operative to transmit interference information to a host computer, the host computer utilizing the interference information to reconfigure the wired network to minimize the effects of any detected interference.

25. The interference monitor of claim 18, the control system operative to switch access points between an active mode and a passive mode to minimize the effects of any detected interference.

26. The interference monitor of claim 18, at least a portion of the interference monitor being incorporated into at least one of an access point, a host computer and a mobile station system.

27. The interference monitor of claim 18 being a stand-alone device coupleable to a wired network.

28. The interference monitor of claim 18 characterizes interference by utilizing at least one of signal strength, frequency domain techniques and time domain techniques.

29. A method for detecting interference in a wireless communication system, the method comprising:

monitoring error statistics from at least one device in a wireless communication system;

determining if unusual error statistic data is present at the at least one device;

requesting unprocessed data samples from the at least one device in which unusual error statistic data is present; and

characterizing interference within the wireless communication system utilizing the unprocessed data samples.

30.   The method of claim 29, the characterizing interference comprising determining the type of interference by processing the unprocessed data samples and comparing the processed data samples to at least one interference template.

31.   The method of claim 29, the characterizing interference comprising determining the location of the interference.

32.   The method of claim 29, further comprising reconfiguring the wireless communication system to minimize the effects of any detected interference.

33.   The method of claim 29, further comprising displaying at least a portion of the wireless communication system and the type and location of interference in a graphical user interface.

34.   The method of claim 29, further comprising switching at least one access point between a passive mode and an active mode to minimize the effects of any detected interference.

35.   An interference monitor for detecting interference in a wireless communication system, the monitor comprising:

means for evaluating error statistics from at least one access point in a wireless communication system;

means for determining if unusual error statistic data is present at the at least one access point; and

means for characterizing interference in the wireless communication system utilizing unprocessed data samples from the at least one access point in which unusual error statistic data is present.

36.   The monitor of claim 35, further comprising means for reconfiguring the wireless communication system to minimize the effects of any detected interference.